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EXAMINER

KAO, JUTAI

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,040	Applicant(s) FOLL ET AL.	
	Examiner JUTAI KAO	Art Unit 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Amendments made on 10/09/2008 cures all problems addressed in the claim/drawing objections and 35 USC 112 rejections. Corresponding rejections and objections are now withdrawn.

Amendments made to claim 1 change the scope of the original claim. The amended claims are re-examined under the new scope of the claims and the current Office Action is made Final as necessitated by the amendments.

Response to Arguments

1. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Regarding claim 1, the applicant argues that the previous grounds of rejection do not cover the newly added claim limitation which includes the following features: the IP budget limiting the total volume of IP packets transmitted from and to a user, a plurality of IP packets and a plurality of data bytes in the IP packets available in a packet-based communication network.

Previous cited reference Harnesk, does include a user-specific IP budget that limits the volume of packets transmitted by the user (see "The token bucket in the serving element is used per logged-in user" recited in paragraph [0039]) and a plurality of IP packets (see "differentiated at a packet level" recited in paragraph [0016]). That is, the token bucket limits the transmission of IP packets to and from a user at a packet level. Even though each packet may have different packet rating, as suggested by the

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applicant's argument, a total volume is still limited by the token bucket even though the maximum allowable volume may differ dynamically depending on the types of packets being transmitted.

However, Harnesk does not explicitly disclose that the IP budget also limits the transmission on the level of "a plurality of data bytes in the IP packets" as required by the claim. Therefore, a secondary reference is included for the new grounds of rejection. Specifically, a passage in the background section of the specification of the current application is used to read on this new limitation. The specific passage describes how a conventional "packet-based mobile radio networks records charging on the basis of the IP packets transmitted. The charges are calculated...from the total volume of the IP packets transmitted from and to a user, their number and the number of data bytes" (see Specification, first paragraph of the Background section on the bottom of page 1 and lines 1-5 of page 2). Since the charges are calculated for charging the IP budget, it would have been obvious to one of the ordinary skill in the art at the time of the invention to calculate an IP budget based on the total volume of the IP packets transmitted from and to a user, their number and the number of data bytes as well.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harnesk (US 2006/0008063) in view of the Background section of the current application (now referred to as APA1, which stands for applicant admitted prior art 1).

Harnesk discloses a system for providing flexible charging in a network including the following features.

Regarding claim 1, a method for monitoring and control of an IP budget of a subscriber, the IP budget limiting the total volume of IP packets transmitted from and to a user (see "The token bucket in the serving element is used per logged-in user" recited in paragraph [0039]), a plurality of IP packets (see "differentiated at a packet level" recited in paragraph [0016]) and a plurality of data bytes in the IP packets available in a packet-based communication network available in a packet-based communication network during online charge assessment of data transmissions (see "charging in a packet switched network...an account of at least one user" recited in the abstract"),

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comprising: providing a control function in a network node (see serving element 206 within network node 210 in Fig. 2) of the communication network which administers a central IP budget (see token bucket 208) assigned by a charge computer (see control system 201; the assigning step is shown in paragraph [0040], which recites: "The credit account function transmits information of the amount of credit that should be reserved...in one single token bucket"); charging a central IP budget, with a level of the charge being determined on a data stream specific basis (see "Packets are charged differently dependent on which service flow the packets belong to" recited in the abstract), in accordance with assessment charges of the charge computer (see charging policy decision point 202 in Fig. 2; Fig. 3 and paragraph [0043] explains the charge assessment regarding a pre-rating step using a charging policy), for usage of resources of a data transmission of a number of data streams in context which can be assigned to a subscriber (see Fig. 3, which shows having different data flows of different service classes).

Regarding claim 2, wherein a data stream-specific conversion factor or weighting factor is specified on the charge computer side (see tariff plan 303 in Fig. 3 "of the control system" as recited in paragraph [0043]) for determining the level of the charger by a data stream, after transmission of a data volume in the data stream the transmitted data volume is weighted by the control function with the weighting factor, from this a corresponding proportion of the IP budget is determined and the proportion of the IP budget produced from this is deducted directly from the IP bucket (see "The received

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calculated charging policy is used to determine the credit amount that should be decremented from the token bucket” as recited in paragraph [0045]).

Regarding claim 3, wherein to determine the weighting factor, the control function accesses a table which comprises data stream-specific assessment charges for data streams which can be assigned to a subscriber (see tariff plan 303, user profile 302 and user rating table 305 in Fig. 3).

Regarding claim 4, wherein a GPRS network is used as the packet-based communication network (see “GPRS” recited in paragraph [0038]).

Regarding claim 5, wherein the control function is located in a GGSN (see “The serving element may reside in ...”a... GGSN” recited in paragraph [0039]).

Regarding claim 6, wherein when a new data stream is added (see “When a user logs on to a communication system...” recited in paragraph [0042]; or see “connection setup such as by PDP Context Activation” recited in paragraph [0094]; wherein the user logging onto the system and the connection setup using PDP contexts is considered having a new data stream), at least one of a new weighting factor, a new table, and an index to or identifier for a table element is transferred by the charge computer to the control function (see “The charging policy comprises a user rating table” as recited in paragraph [0043]; and see Fig. 2, wherein the charging policy decision point 202 of the charge computer informs the charging policy enforcement unit of the packet forwarding system of the charging policy).

Regarding claim 7, the central IP budget is charged for resource usage by those data streams which belong to one context to which an IP address (see “A service, is the

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collection of all IP flows to and from a specific destination" recited in paragraph [0057], that is, a destination of the same IP address) of a same subscriber can be assigned (see "the use of a single token bucket per subscriber" as recited in paragraph [0022]).

Regarding claim 8, the method wherein the central IP budget is charged for usage of resources by those data streams which belong to a same context (see "the use of a single token bucket per subscriber" as recited in paragraph [0022]).

Regarding claim 10, wherein the charge computer allocates to the control function an additional IP budget for administration (see "The credit reservation is made for a plurality of services...and the overall credit reservation is sent to the serving element and put into the user-specific token bucket" recited in paragraph [0044], wherein the credit is used for administering the use of resources).

Regarding claim 11, wherein the control function, on addition and/or removal of at least one data stream (see "When a user logs on to a communication system..." recited in paragraph [0042]; or see "connection setup such as by PDP Context Activation" recited in paragraph [0094]; wherein the user logging onto the system and the connection setup using PDP contexts is considered having a new data stream), transfers a remaining IP budget to the charge computer and the charge computer assigns the control function a new IP budget (see "The credit reservation is made for a plurality of service...and the overall credit reservation is sent to the serving element and put into the user-specific token bucket"; wherein the credit reservation is transmitted from the serving node to the control system, informing of the status of the token bucket, that is, the need of tokens; the control system then provide the serving node of tokens;

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also see “When a token bucket is empty or a predefined threshold is reached, the usage is confirmed toward the control system and a new resource reservation is done...”

recited in paragraph [0046]).

Regarding claim 12, wherein the control function informs the charge computer (see “the serving element...initiates a reservation signaling sequence towards the credit account function of the control system” recited in paragraph [0044]) about the addition and/or removal of a data stream (see “When a user logs on to a communication system...” recited in paragraph [0042]; or see “connection setup such as by PDP Context Activation” recited in paragraph [0094]; wherein the user logging onto the system and the connection setup using PDP contexts is considered having a new data stream) and the charge computer gives the control function specification about another use of the IP budget (see “The received calculated charging policy...” recited in paragraph [0045]).

Regarding claim 13, wherein the charge computer informs the control function (see Fig. 2, wherein the charging policy decision point 202 of the charge computer informs the charging policy enforcement unit of the packet forwarding system of the charging policy) by means of a table or a pointer to a position in a table about the weighting factor (see “The charging policy comprises a user rating table” as recited in paragraph [0043]) with which a transmitted data volume in a data stream is to be newly weighted in the event of a parameter change (see “When the validity conditions no longer are valid, a signalling sequence is initiated to get a new up-dated charging policy” recited in paragraph [0046]).

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Harnesk does not disclose the following features: regarding claim 1, wherein the IP budget limits a plurality of data bytes in the IP packets available.

APA1 discloses a conventional packet-based mobile radio network including the following features.

Regarding claim 1, the IP budget limiting the total volume of IP packets transmitted from and to a user, a plurality of IP packets and a plurality of data bytes in the IP packets available in a packet-based communication network (see "packet-based mobile radio networks records charging on the basis of the IP packets transmitted. The charges are calculated...from the total volume of the IP packets transmitted from and to a user, their number and the number of data bytes" recited in the Specification, first paragraph of the Background section on the bottom of page 1 and lines 1-5 of page 2).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Harnesk using features, as taught by APA1, in order to control the flow of traffic in a more precise level (byte level).

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harnesk and APA1 as applied to claim 1 above, and further in view of Garcia-Luna-Aceves (US 2002/0097726).

Harnesk and APA1 disclose the claimed limitations as shown above.

Harnesk also discloses the following features.

Regarding claim 9, wherein on addition of a new data stream added (see "When a user logs on to a communication system..." recited in paragraph [0042]; or see

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"connection setup such as by PDP Context Activation" recited in paragraph [0094]; wherein the user logging onto the system and the connection setup using PDP contexts is considered having a new data stream) and usage of resources on part of the new data stream the existing IP budget is charged (see "The received calculated charging policy is used to determine the credit amount that should be decremented from the token bucket" as recited in paragraph [0045]; wherein the token bucket is the existing IP budget).

Harnesk does not disclose the following features: regarding claim 9, wherein an additional IP budget is added to the existing IP budget.

Garcia-Luna-Aceves discloses a method for maintaining reservation state in a network router including the following features.

Regarding claim 9, herein an additional IP budget is added to the existing IP budget (see "when a new flow...is established...the rate of each of the buckets on the path...is incremented..." recited in paragraph [0076]).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Harnesk and APA1 using features, as taught by Garcia-Luna-Aceves, in order to provide required resources for the new flow.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUTAI KAO whose telephone number is (571)272-9719. The examiner can normally be reached on Monday ~Friday 7:30 AM ~5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571)272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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